

Correspondence

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Partial agonists in schizophrenia

The editorial by Bolonna & Kerwin (2005) is both timely and important. The authors succinctly present the case for the use of partial agonists of dopamine receptors, concluding that 'the reviewed evidence suggests a promising future for dopamine receptor partial agonists'. While this is arguably true on the basis of the evidence presented, theoretical and empirical concerns regarding the use of these medications remain.

The introduction of aripiprazole on an individual patient level may prove problematic (DeQuardo, 2004; Ramaswamy *et al*, 2004). Although effective switching strategies from atypical agents to aripiprazole have been described, a number of reports of worsening psychosis following the introduction of aripiprazole (DeQuardo, 2004; Ramaswamy *et al*, 2004) have been published. While these cases may be accounted for by unrelated illness relapse, other theoretical explanations should be considered. Up-regulation of dopamine receptors is well recognised during treatment with neuroleptics, and results in supersensitivity to dopamine at the sites of receptor blockage. This has led to the concept of a neuroleptic-induced supersensitivity psychosis (Steiner *et al*, 1990) wherein up-regulation effectively outstrips receptor blockade with emergent psychosis resistant to treatment. Supersensitivity could explain cases of psychosis developing with aripiprazole. Cessation of an antagonist with subsequent introduction of a partial agonist could result in a net excess of neurotransmission due to over-stimulation of a supersensitive system (despite the partial agonist demonstrating sub-maximal stimulation in normal systems). The high receptor affinity of partial agonists may make such symptoms difficult to treat, as few drugs are likely to be able to displace these agents from receptor complexes. Drugs that can displace partial agonists run the risk of negating the therapeutic

effects of stabilisation of the dopaminergic system in schizophrenia, perhaps most importantly at times of relapse when patients are likely to receive 'as required' doses of potent D₂ antagonists.

While empirical evidence largely supports the primary efficacy of these agents (DeLeon *et al*, 2004), clinical experience of partial agonists is in its infancy. Good-quality data from naturalistic studies are required to establish the effectiveness of these drugs, but in the meantime we call for post-marketing surveillance to quantify the scale of the problem of cross-titration.

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DeLeon, A., Patel, N. C. & Crismon, M. L. (2004) Aripiprazole: A comprehensive review of its pharmacology, clinical efficacy, and tolerability. *Clinical Therapeutics*, **26**, 649–666.

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Ramaswamy, S., Vijay, D., William, M., et al (2004) Aripiprazole possibly worsens psychosis. *International Clinical Psychopharmacology*, **19**, 45–48.

Steiner, W., Laporta, M. & Chouinard, G. (1990) Neuroleptic-induced supersensitivity psychosis in patients with bipolar affective disorder. *Acta Psychiatrica Scandinavica*, **81**, 437–440.

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Suicide in prisons

On 13 January 2004 Dr Harold Shipman, a doctor convicted of murder, was found dead in his prison cell, following apparent self-hanging. Subsequent media reports tended to give considerable detail about the apparent circumstances of his death.

In 1999 there were, on average, 1.8 self-inflicted deaths per week in prisons in

England and Wales, yielding a rate of 0.3 per 10 000 prisoners per week (HM Prison Service, 2001). Preliminary data for 2003 are similar, indicating 1.8 apparently self-inflicted deaths (inquests pending) per week (Seenan, 2004). In the week following the death of Dr Shipman, five apparently self-inflicted deaths (inquests pending) were reported in prisons in England and Wales (HM Prison Service Safer Custody Group, personal communication, 2004); this apparent peak, however, is similar to that in a comparable week in January 2003.

In Irish prisons, there were nine apparently self-inflicted deaths (inquests pending) between January 2000 and April 2003, yielding a rate of 0.2 per 10 000 prisoners per week (Bresnihan, 2003). In the week following the death of Dr Shipman, there were two apparently self-inflicted deaths (inquests pending; Brady, 2004), yielding an increased rate of 6.4 per 10 000 prisoners that week (Poisson distribution $P=0.0018$). While caution must be exercised when interpreting data about rare events, we none the less believe these data merit explanation.

At a population level, one possible explanation relates to prisoners' average 'dose' of exposure to detailed, graphic media coverage of suicidal behaviour, which is known to affect suicidal behaviour in those exposed (the Werther effect). Interestingly, over 90% of prison cells in Ireland have in-cell television, and, while it is difficult to obtain official figures, it appears that the proportion of cells with in-cell television is substantially lower in England and Wales.

As Shaw *et al* (2004) demonstrate, prison populations often comprise individuals with multiple risk factors for suicide. We suggest that repeated exposure to vivid, detailed accounts of the methods apparently used in high-profile, apparently self-inflicted deaths in prison may be a critical additional risk factor in this population. We renew calls for responsible reporting of suicidal behaviour and for development of improved prison mental health services.

HM Prison Service (2001) *Prevention of Suicide and Self-Harm in the Prison Service: An Internal Review*. London: HM Prison Service. http://www.hmprisonservice.gov.uk/filestore/1032_1423.pdf

Bresnihan, V. (2003) *To Be or Not to Be, in Observations Cells?* Dublin: Irish Penal Reform Trust.

Brady, T. (2004) Probe launched after prisoner found hanged. *Irish Independent*, 17 January 2004. Available